



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/529,844	03/31/2005	Frederic Noelle	CAB-38031	5268
116 7590 11/27/2007 PEARNE & GORDON LLP 1801 EAST 9TH STREET SUITE 1200 CLEVELAND, OH 44114-3108			EXAMINER VANATTA, AMY B	
			ART UNIT 3765	PAPER NUMBER
			MAIL DATE 11/27/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No. **10/529,844**

Applicant(s)

NOELLE, FREDERIC

Examiner

Amy B. Vanatta

Art Unit

3765

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 9-16 is/are rejected.
- 7) ☒ Claim(s) 8 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 03312005, 09182007.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 9-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 9 is rendered indefinite by the recitation of "means intended for compacting". The term "intended" is an indefinite limitation, in that it is unclear whether the means actually performs the function. Also, it is unclear whether or not this term is intended to invoke 35 U.S.C. 112, sixth paragraph as a means-plus-function limitation. More precise and definitive claim language should be recited, such as "means for compacting". Likewise, "means intended for reducing the displacement speed" renders the claim indefinite.

Claim 11 is confusing in reciting a "*second* cylinder" when a first cylinder was not set forth.

In claim 14, line 3, "the other moveable element" lacks proper antecedent basis.

In claim 15, "means of maintaining" renders the claim indefinite in that the language is imprecise. It is suggested that the limitation read "means *for* maintaining". Also, the metes and bounds of the limitation "means of maintaining" are unclear because it is not clear whether this term is intended to invoke 35 U.S.C. 112, sixth paragraph as a means-plus-function limitation.

Claim 16 is indefinite in reciting a use of a machine as in claim 1, however no machine was claimed in claim 1.

Further regarding claim 16, the claim provides for the use of the method or machine of claim 1 but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim Rejections - 35 USC § 101

3. Claim 16 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section

351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 4-7, 9-14 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Goldman (GB 891,143).

GB 891,143 to Goldman discloses a method of producing a nonwoven fabric as claimed, including providing a mat of filament or fibers which is in displacement (see web 10), the web being compacted in the direction of thickness by condenser 17 at a point on its path of displacement, with a reduction in the displacement speed of the mat at this point of compaction (page 2, lines 10-21). The filaments or fibers are composed of an "organic material" in that Goldman teaches the use of various natural fibers which are derived from living matter (plants) and thus are "organic" material to the extent recited in claim 1 (see pg. 1, lines 20-23 and 35-36; pg. 2, lines 107-110). The mat is consolidated downstream at a consolidation station by squeeze rolls 23, which subject the mat to pressure between the squeeze rolls (page 2, lines 65-67 and 71-73). The mat is maintained at a reduced speed while passing through the consolidation station (rolls 23) as in claim 5. The mat is wetted just downstream of compacting by wetting roll 21 (pg. 2, lines 54-56), as in claim 4. Goldman discloses that the mat may be coated with a chemical which results in bonding when subjected to the pressure of the squeeze rolls (pg. 2, lines 60-67); this creates chemical binding as in claim 6. Regarding claim 7, the mat is a mat of fibers coming from a card (see lickerin 12, which is a carding cylinder).

Goldman also discloses a machine for producing a nonwoven fabric as in claim 9, including a first element (16) for delivering a mat to means (condenser 17) intended for compacting it in direction of thickness, where the means (condenser 17) also forms a means for reducing the displacement speed of the mat at the point where it is compacted (page 2, lines 10-21). As to claim 10, the compacting and speed reduction means are implemented by the formation of a nipping point between the first element 16 and another movable element (condenser 17) having a linear speed lower than that of the first element (16); see Fig. 1 and pg. 1, lines 85-90 and pg. 2, lines 13-21). The other moveable element (17) is a cylinder as in claim 11. The machine includes a means for wetting (22) as in claim 12. The machine includes means for consolidating the mat (23), which comprise chemical binding means, as disclosed by applicant as the means for consolidating. The consolidation means (23) consolidate the mat as it passes over a moveable element (see lowermost one of rolls 23), as in claim 14.

Goldman teaches that the method and apparatus result in a web having uniformity of tensile strength both longitudinally and transversely of the web (pg. 1, lines 49-50; pg. 2, lines 120-123; pg. 3, lines 5-7), thus reducing the ratio of this property in the length direction versus the breadth direction, as in claim 16.

6. Claims 1, 5-7, 9-11, 13, and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Kummermehr et al (US 5,671,518).

Kummermehr et al disclose a method of producing a nonwoven fabric as claimed, including providing a mat of filament or fibers which is in displacement (see

mat 16), the mat being compacted in the direction of thickness by conveyors 17,18,19 and 20. The mat is compacted at a point on its path of displacement at the junction of conveyors 17,18 with conveyors 19,20 (see point 21), and there is a reduction in the displacement speed of the mat at this point of compaction 21 (col. 7, lines 1-10). The filaments or fibers are composed of an "organic material" in the fibers are derived from living matter and thus are "organic" material to the extent recited in claim 1. The mat is consolidated downstream at a consolidation station by needling device 26 (col. 7, lines 39-46), as in claims 1 and 6. It appears that the mat is maintained at a reduced speed while passing through the consolidation station (26) as in claim 5. Regarding claim 7, the mat is a mat of fibers coming from an air-laid operation (see 11,15 in Fig. 2 and col. 6, lines 59-65).

Kummermehr et al also disclose a machine for producing a nonwoven fabric as in claim 9, including a first element (17) for delivering a mat to means (conveyors 18,19,20) intended for compacting it in direction of thickness, where the means also forms a means for reducing the displacement speed of the mat at the point (21) where it is compacted (col. 7, lines 1-10). As to claim 10, the compacting and speed reduction means are implemented by the formation of a nipping point between the first element 17 and another movable element (19,20) having a linear speed lower than that of the first element (18). The other moveable element (19,20) is a conveyor as in claim 11. The machine includes means for consolidating the mat (26), which comprises a mechanical needling device, as disclosed by applicant as the means for consolidating. The

consolidation means (26) consolidate the mat as it passes over a moveable element (see conveyor beneath needling device 26 in Fig. 2), as in claim 14.

7. Claims 9 and 13 are rejected under 35 U.S.C. 102(e) as being anticipated by Dilo et al (US 6,634,069).

Dilo et al also disclose a machine for producing a nonwoven fabric as in claim 9, including a first element (2) for delivering a mat to means (5,7 or 5,6,7, or 170 or 170') intended for compacting it in direction of thickness, where the means also forms a means for reducing the displacement speed of the mat at the point where it is compacted; that is, the speed of rollers 5,7 or of rollers 5,6,7 is reduced with respect to the speed of rollers 8,9 (col. 6, lines 5-12). Similarly, the speed of roller 170 is reduced with respect to the speed of rollers 8,9 (Fig. 6 and col. 7, lines 29-30), and the speed of roller 170' is reduced with respect to the speed of roller 170" (Fig. 7 and col. 7, lines 39-43). Regarding claim 13, the machine includes means for consolidating the mat (13), which comprises a mechanical needling device, as disclosed by applicant as the means for consolidating.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-3 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dilo et al (US 6,634,069).

Dilo et al disclose a method of producing a nonwoven fabric including providing a mat of filament or fibers which is in displacement, the mat being compacted in the direction of thickness by rollers 5,7 or rollers 5-7 or roller 170 or roller 170'. The mat is compacted at a point on its path of displacement at the rollers 5,7 or rollers 5-7 or roller 170 or roller 170', and there is a reduction in the displacement speed of the mat at this point of compaction. That is, the speed of rollers 5,7 or of rollers 5,6,7 is reduced with respect to the speed of rollers 8,9 (col. 6, lines 5-12). Similarly, the speed of roller 170 is reduced with respect to the speed of rollers 8,9 (Fig. 6 and col. 7, lines 29-30), and the speed of roller 170' is reduced with respect to the speed of roller 170" (Fig. 7 and col. 7, lines 39-43). The mat is consolidated downstream at a consolidation station by needling device 13, as in claims 1 and 6.

Dilo does not disclose that the fibers of the fleece comprise an organic material, such as recited in claim 1, however fiber mats which undergo compaction and needling to form a nonwoven fabric are conventionally comprised of organic material. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use fibers comprising organic material in the fleece which is treated in the method of Dilo, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Regarding claim 2, Dilo does not disclose a reduction in displacement speed of the rollers 5,7, rollers 5-7, roller 170, or roller 170' relative the speed of rollers 8,9 or 170" of an amount of 5-50%. It is within the ordinary skill in the art, however, through routine experimentation, to determine the optimal amount of speed differential between the rollers in the method of Dilo as appropriate for the desired web product characteristics. It would have been obvious to one having ordinary skill in the art at the time the invention was made to reduce the displacement speed by 5 to 50% in the method of Dilo et al, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable range involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Regarding claim 3, Dilo does not disclose the amount of reduction in thickness of the fiber mat when compacted by the rollers. It is within the ordinary skill in the art, however, through routine experimentation, to determine the optimal amount of thickness reduction for the mat as appropriate for the desired web product characteristics. It would have been obvious to one having ordinary skill in the art at the time the invention was made to reduce the thickness of the mat at compacting by 99% to 30% in the method of Dilo et al, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable range involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

10. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kummermehr et al (US 5,671,518).

Kummermehr et al disclose a method as claimed, however a reduction in displacement speed of the mat of an amount of 5-50% is not specifically disclosed. It is within the ordinary skill in the art, however, through routine experimentation, to determine the optimal amount of reduction in speed of the mat as appropriate for the desired web product characteristics. It would have been obvious to one having ordinary skill in the art at the time the invention was made to reduce the displacement speed by 5 to 50% in the method of Kummermehr et al, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable range involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Regarding claim 3, Kummermehr et al does not disclose the amount of reduction in thickness of the fiber mat when compacted. It is within the ordinary skill in the art, however, through routine experimentation, to determine the optimal amount of thickness reduction for the mat as appropriate for the desired web product characteristics. It would have been obvious to one having ordinary skill in the art at the time the invention was made to reduce the thickness of the mat at compacting by 99% to 30% in the method of Kummermehr et al, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable range involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Allowable Subject Matter

11. Claim 8 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base

claim and any intervening claims.

12. Claim 15 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amy B. Vanatta whose telephone number is 571-272-4995. The examiner can normally be reached on Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Welch can be reached on 571-272-4996. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Application/Control Number:
10/529,844
Art Unit: 3765

Page 12

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Amy B Vanatta
Primary Examiner
Art Unit 3765